LONG BEACH CITY COLLEGE
Educate. Engage. Empower.

A Model for Higher Education Integration through Clean Energy Workforce Training Program

Photo courtesy Ameco Solar, Paramount CA

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Resource Development
Workforce Development
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Funding Sources

STATE OF CALIFORNIA ENERGY COMMISSION

EDD Employment Development Department State of California

California WORKFORCE INVESTMENT BOARD

Role of Community Colleges

- Address Gap of Green Workforce Training
  - ST: Home Performance Contractors, HERS Raters, Weatherization/Insulation & HVAC, Solar, Real Estate Professionals, and other ancillary
  - LT: Engineers, construction management, architects, MEP (mechanical electrical and plumbing), system designers
- Partnering with industry/ industry associations is a key component of green collar workforce development
- Government initiatives and partnerships set the stage for market transformation by incentivizing energy upgrade

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Autodesk

CalCERTS, inc.

Pacific Gateway
WORKFORCE INVESTMENT NETWORK

energy upgrade™ CALIFORNIA

The Port of LONG BEACH

TRANSITION CENTER

CITY OF LONG BEACH INCORPORATED 1897

SIEMENS

California Building Performance Contractors Associat
cbpca

AQUARIUM OF THE PACIFIC®
A non-profit institution

HARDING CONSTRUCTION & SUSTAINABLE SOLUTIONS

U.S. GREEN BUILDING COUNCIL

GreenPlumbe

today's energy solutions.

Strategic Partnerships

- SBDC
  - Green Gazelles
- PGWIB
  - PLA
  - Green Building Council
- Industry
  - Associations
  - Trends
  - Qualifications
- Cities
  - Driving the demand through ordinances, implementation of incentive programs, strategic planning on development project
  - Community Action Partnership
  - LA County Office of Sustainability

Energy Upgrade California

LACEP Program Overview

- Alliance with CEC, CPUC, County of LA, Southern California Edison and Southern California Gas Company
- 30,000 homes by June, 2013
- Driving consumer demand
- Going beyond energy: More comfort, cost, environmental and health benefits

Skills Gap & Barriers

- Minimum Qualifications
- Certification Costs
- Classroom and field technical training
- Marketing and business skills

Workforce Development

- Emerging Home Performance Industry in LA
- Opportunities for Contractors, HERS Raters, Weatherization/Insulation & HVAC, Solar, Real Estate Professionals, and other ancillary

Workforce Needs & Current Capacity

Workforce Type	TOTAL
BPI Analyst	176
Installation Technicians	557
HERS II Raters	55

Data from LACEP

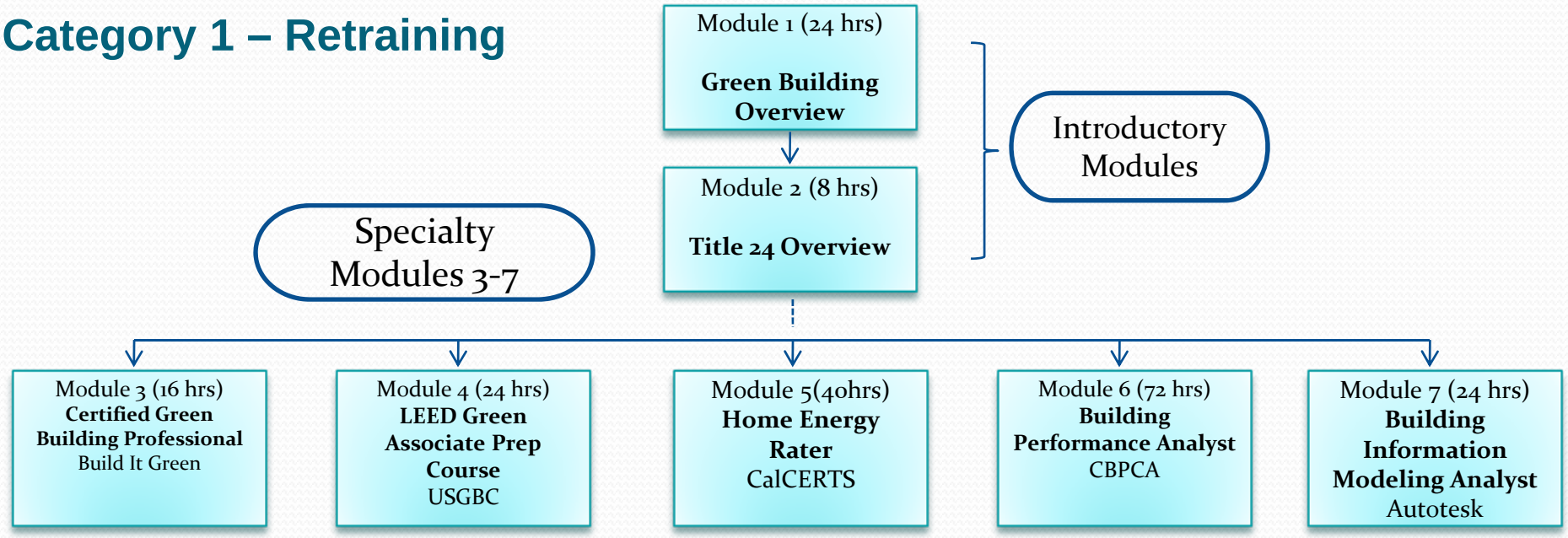
Licensed Contractors	Active Number in LA County
Home Performance Contractors / BPI Analyst	10
General Contractor (B)	22,247
Insulation (C□-2)	160
HVAC (C□-20)	2,806
HERS II Raters	0
GreenPoint Raters Existing Home	6

Data from BPI, HERS providers, Build It Green, & Contractors State License Board

Training Providers in LA Region

BPI Affiliates (10)	HERS Providers	CEWTP Recipients (5)
Build It Green	CHEERS	Los Angeles County
CACTUS	CalCERTS	Long Beach City College
CBPCA		Los Angeles City
ConSol		LA Trade Technical College
Energy Conservation Inst.		South Bay Workforce Investment Board
Greener Dawn		
JTRL		
OurEvolution		
Richard Heath & Assoc.		
Synergy Co.		

CEWTP
Category 1 – Retraining



Training Track	Occupations	Training Modules	Length of Training	Expected Wages
Track 1	LEED Green Associate Architect/ Designer	Modules 1,2,4, or 8	56 Hours	$26.00 - $39.00
Track 2	Home or Building Energy Rater	Modules 1,2,5	72 Hours	$21.35 - $31.25
Track 3	Building Performance Analyst	Modules 1,2,6	104 Hours	$20.83 - $31.25
Track 4	Water/ Energy Auditor	Modules 1,2,7	64 Hours	$21.35 - $31.25

GEMS

Business Community

What is a GREEN Building?

How does it benefit me?

BY ALBERT ANDRES OF GREEN ENERGY MANAGEMENT SERVICES (GEMS)

A green building:

- Provides a comfortable and healthier environment
- Incorporates energy and water-efficient technologies
- Improves indoor air quality and occupant satisfaction
- Is easier to maintain and built to last longer
- Includes renewable energy technologies
- Brings higher resale value

DO SOMETHING GOOD FOR THE ENVIRONMENT: Make your home or workplace a little greener. Here are a few low cost ways you can reduce high energy bills and global warming. Every little bit helps so do a few changes and contribute to a happy planet. Let's talk about a few ways you can help and save money.

1. USE CFLS OR LED'S

Replace your incandescent light bulbs with ENERGY STAR® qualified compact fluorescent light bulbs (CFLs) or LED's. By replacing even your five most frequently used light bulbs, you could save $100 per year.

2. PROGRAM YOUR THERMOSTATS

Save 10% on your heating and cooling costs just by setting your thermostat back when you're not home and while you're sleeping. Program your thermostat to 78 degrees F or higher in the summer and 62 degrees F or lower in the winter. Select ENERGY STAR® qualified programmable thermostats.

3. REPAIR OR PLUG AIR LEAKS

Air leaks waste energy in the home, but they can be simple to fix. Install weather-stripping and caulk to stop those drafts and improve indoor comfort. It's inexpensive, easy and almost anyone can do it. Look for leaks around windows, doors, electrical outlets, and plumbing penetrations.

4. TUNE-UP YOUR HVAC SYSTEM

Heating, ventilating, and air conditioning maintenance is important to healthy and efficient heating and cooling. Get a professional inspection if you haven't had one in a few years. It could save you 5% to 10% on your heating and cooling bills. Also, clean or replace your filter every month. Dirty filters block normal airflow and significantly reduce the efficiency of the system, which wastes your money.

5. GO LOW-FLOW ON SHOWERS AND FAUCETS

Install low-flow showerheads and faucet aerators to save resources without sacrificing water pressure. An efficient showerhead could save a family of four up to $285 per year. They can cost less than $15, and installing them couldn't be easier: they just screw on.

6. OPTIMIZE YOUR WATER HEATER

Put an insulative jacket around your hot water heater and insulate the pipes around the water heater. Also consider turning the temperature on the water heater down to 120 degrees. This will save you money and prevent scalding. Also, look into a Tankless Water System.

7. PLANT A TREE

Shade trees can lower your cooling costs. They also make your home more comfortable and provide habitat for birds. Trees and shrubs can act as windbreaks shielding your home from cold winds and reducing heating costs.

8. BUY ENERGY STAR

When replacing your appliances, select ENERGY STAR qualified products. When replacing your water heater, furnace, or air conditioner, you should also select ENERGY STAR qualified products. You could save 10-30% on the operating costs vs non-ENERGY STAR equivalents.

9. REQUEST A BLOWER DOOR TEST

A blower door test will uncover the hidden holes and cracks that are the main source of energy loss in your home. Hiring a certified Home Energy Rater (HERS) costs $200 to $400 and the inspection cost can be paid for within two years.

10. USE LOW-VOC PRODUCTS

After painting, the volatile organic compound level can be 1,000 times the healthy normal level. Select low or no-VOC paints and finishes combating this health hazard. When selecting paints, look for the Green Seal. When cleaning around the house, use non-toxic natural products or make your own green cleaning products.

11. CHECK INSULATION

Make sure that there are no areas in your attic floor with inadequate insulation. Even a small area with limited or no insulation, or insulation that has been damaged or compressed, can significantly decrease the effectiveness of the area's insulation. How much insulation do you need? Follow the Department of Energy's recommendations.

12. SOLAR POWER

Passive solar design takes advantage of the summer sun when it is higher than the winter sun. Overhangs shade the building from the summer sun, keeping it cool. The same overhangs allow the lower winter sun to enter the building and heat an interior thermal mass wall. Solar panels (also known as photovoltaic (PV) panels) have no moving parts and emit no waste. When sunlight strikes the thin panel of silicon, the electrons get excited and start moving, this produces an electrical current. There will be a number of solar companies with information at the Huntington Beach Green Expo on September 18th, so please stop by and see what's new.

Back to Nature

ENJOY A TAMED WILDERNESS AT THESE LOCAL SPOTS

Bolsa Chica Wetlands

One of the City's Best Spots for Birdwatching and Nature Photography

"The Bolsa Chica Ecological Reserve extends along the east side of Pacific Coast Highway in the city of Huntington Beach from Warner Avenue to Seapoint Avenue. It is open to the public daily from sunrise to sunset."

-bolsachica.org

Coming Soon: HB Community Garden

The **Huntington Beach Community Garden (HBCG)** is a voluntary non-profit organization founded from a desire to create an organic, self-sufficient public garden for the citizens of Huntington Beach. The grassroots organization is made up of gardening enthusiasts, business professionals, teachers, master gardeners and community organizers who share the common vision of promoting urban gardening and greening in Huntington Beach; there are now over 100 members. This garden, which will have 111 plots on a Southern California Edison site on Atlanta east of Brookhurst, will be an organic & chemical free community garden. For more information or to join the HBCG, please contact Vice President, Annette Parsons at akpjr@socal.rr.com and visit www.huntingtonbeachcommunitygarden.com.

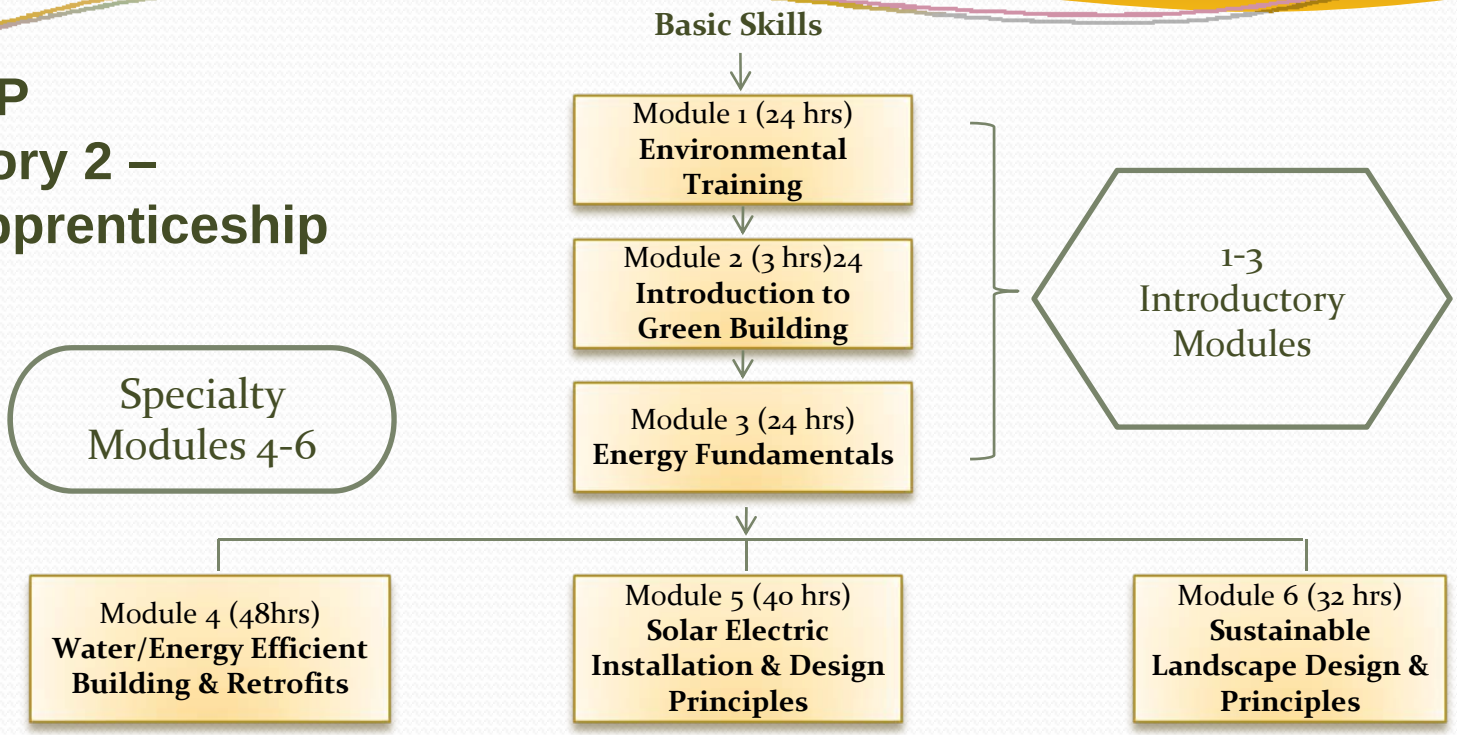
Shipley Nature Center

Mon-Sat: 9:00 AM to 1:00 PM

17881 Goldenwest Street
Huntington Beach

Shipley Nature Center is an 18-acre natural area. Situated within Huntington Central Park, the nature center is not only a sanctuary for the local wildlife, but it is also a haven for the residents and visitors of Orange County.

CEWTP Category 2 – Pre-Apprenticeship



Training Track	Occupations	Training Modules	Length of Training	Expected Wages
Track 1	Resource Conservation Specialist	Modules 1, 2, 3	72 Hours	$10.00 - $16.00
Track 2	Basic Weatherization Specialist	Modules 1, 2, 3, 4	120 Hours	$12.35 - $20.25
Track 3	Retrofitting Specialist	Modules 1, 2, 3, 4	120 Hours	$12.83 - $21.35
Track 4	Solar Electrical Installer Assistant	Modules 1, 2, 3, 5	112 Hours	$12.83 - $21.35
Track 5	Landscape Designer Assistant	Modules 1, 2, 3, 6	104 Hours	$12.35 - $20.25

In Summary…

- Workforce Gap in BPI and HERS II to perform energy audits and energy efficiency improvements
  - Current training capacity is sufficient to meet the formal classroom training needs
  - Field mentoring to gain expertise is critical
  - CCs well positioned to respond to market demand for certified professionals
- Challenges
  - Trainings cost is significant challenge => need for subsidized training
  - Union Partnerships
- Leveraging resources is crucial
  - NSP II and III
  - Municipal Retrofits
  - Dept. of Energy Weatherization Program
- Local decision makers need to be on board!
  - Trade Associations